

# Data Governance Commission Presentation



AZEDS Transition, AELAS FY16 review,  
FY17 Budget Proposal and Project Update

Presented to:

The Data Governance Commission

May 27, 2016

Lisa Blyler

Deputy Associate Superintendent of ADE IT

# Agenda

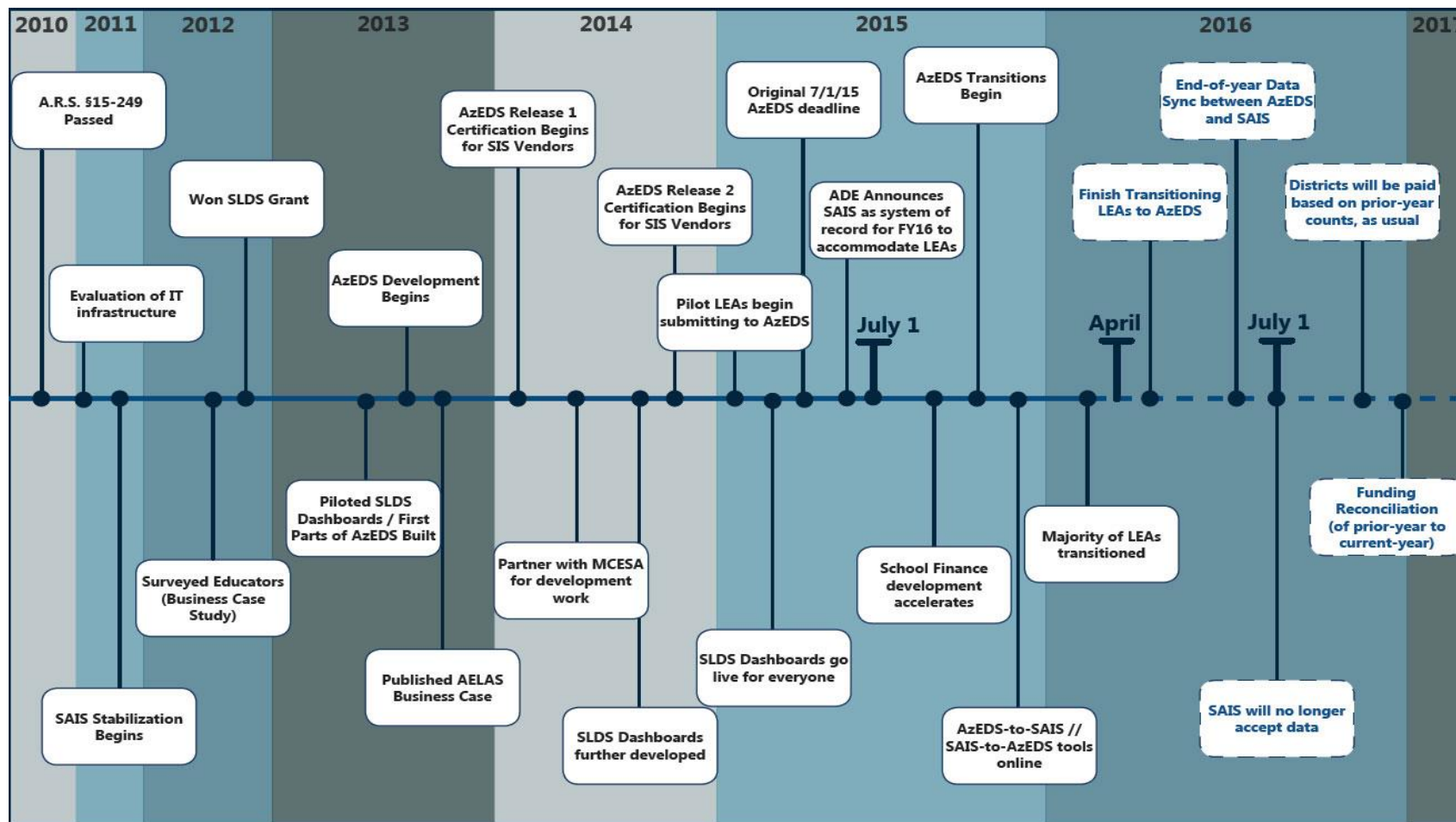
- AZEDS Transition Discussion
- AELAS FY16 review, FY17 Budget Proposal and Project Update
- AELAS Data Architecture Review
- IT and Data Security Update
- ADE Internal Controls and Data Request Policies
- Adoption of Changes to K-12 Student Data Collections for FY18
- 2016 Legislative Session Review



Lisa Blyler

# AZEDS TRANSITION DISCUSSION

# AzEDS transition timeline



# What was said about the transition

- Notified ASCUS that the transition was deferred on 4/23/15 allowing LEAs to adjust
  - Avoiding the big bang rollout we were heading towards
  - Moving from SAIS to AzEDS is not optional
- Outlined to the difficulties at the ASCUS meeting on 9/17/15
- Everyone from the legislature, to ADE, to ASCUS to the students are in this together
  - Support is in place
- Communicated that it will take time

# Letter to LEAs in March 2016

- Reiterated that all LEAs must complete transition from SAIS to AzEDS by June 30, 2016
  - Extended using SAIS as system of record for one year
- 78% of state already transitioned and the legislature already invested too much to turn around
- The transition to SAIS years ago was far worse
  - All schools received payments back then!
  - We are ahead of where we were then (auditors agree)
- These two systems were never going to match!
  - Working on a solution to get to 99%

# Transition to AzEDS

All Metrics as  
of 5/11/2016

		Counts for LEAs migrating to AzEDS					All Metrics as of 5/11/2016	
Status Description (Multiple)		Closed, Future, or Inactive LEAs filtered						
5/11/16	Data from 5 AM							
Row Labels	LEAs	In Implementation	% Implementing	LEAs Submitting	% Implementation complete	% of Total submitting	Incomplete Implementations	Not yet Implementing
Apex	6	6	100%	6	100%	100%	0	0
AZDJC	1	1	100%	1	100%	100%	0	0
Connexus	1	1	100%	1	100%	100%	0	0
Edupoint	91	48	53%	39	81%	53%	9	43
FlipSwitch	1	1	100%	1	100%	100%	0	0
Hane Solutions	10	10	100%	10	100%	100%	0	0
Illuminate	2	2	100%	2	100%	100%	0	0
InfiniteCampus	13	8	62%	8	100%	62%	0	5
JupiterEd	2	2	100%	2	100%	100%	0	0
PowerSchool	166	157	95%	157	100%	95%	0	9
Schoolmaster	318	271	85%	260	96%	85%	11	47
Statewide SIS	47	24	51%	24	100%	51%	0	23
Tyler V10	1	1	100%	1	100%	100%	0	0
Unknown	1	-	0%	-	0%	0%	0	1
Grand Total	660	532	81%	512	96%	81%	20	128
		+ 3 LEAs since Yesterday		+ 4 LEAs for the week				
				Green Highlights changes from last report				

# Vendor/students transition to AzEDS

All Metrics as  
of 5/11/2016

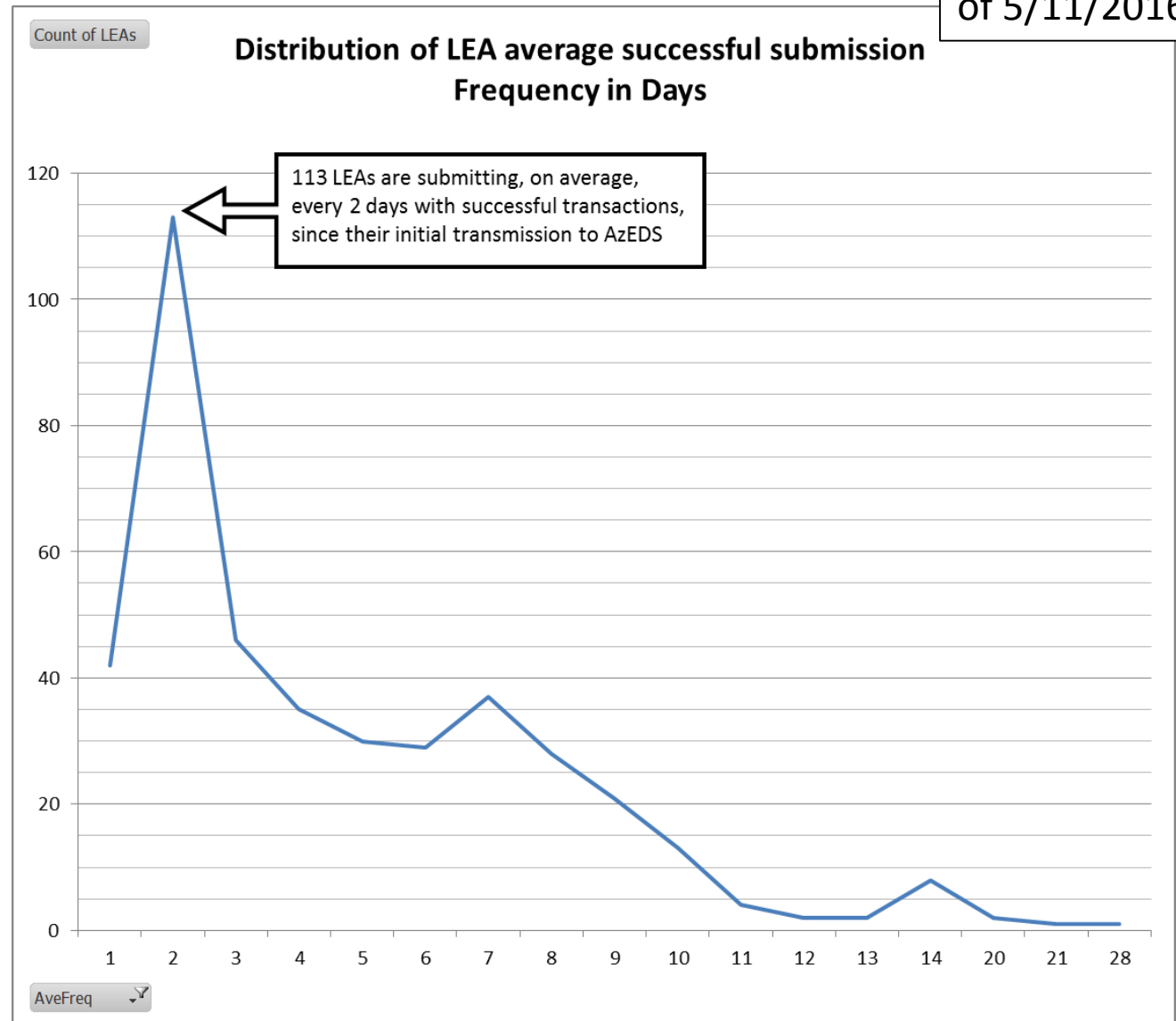
Vendors	Vendor % to total Students	Vendor % Students on AzEDS	Vendor % Students on SAIS
Apex	0.22%	0.22%	0.00%
AZDJC	0.04%	0.04%	0.00%
Connexus	0.24%	0.24%	0.00%
Edupoint	38.85%	17.99%	20.87%
FlipSwitch	1.16%	1.16%	0.00%
Hane Solutions	0.10%	0.10%	0.00%
Illuminate	1.66%	1.66%	0.00%
InfiniteCampus	13.32%	4.74%	8.59%
JupiterEd	0.02%	0.02%	0.00%
PowerSchool	19.92%	19.65%	0.27%
Schoolmaster	15.40%	13.28%	2.12%
Statewide SIS	7.80%	1.36%	6.44%
Tyler V10	1.27%	1.27%	0.00%
Unknown			0.00%
<b>Grand Total</b>	<b>100.00%</b>	<b>61.72%</b>	<b>38.28%</b>



# Frequency of submission to AzEDS

All Metrics as  
of 5/11/2016

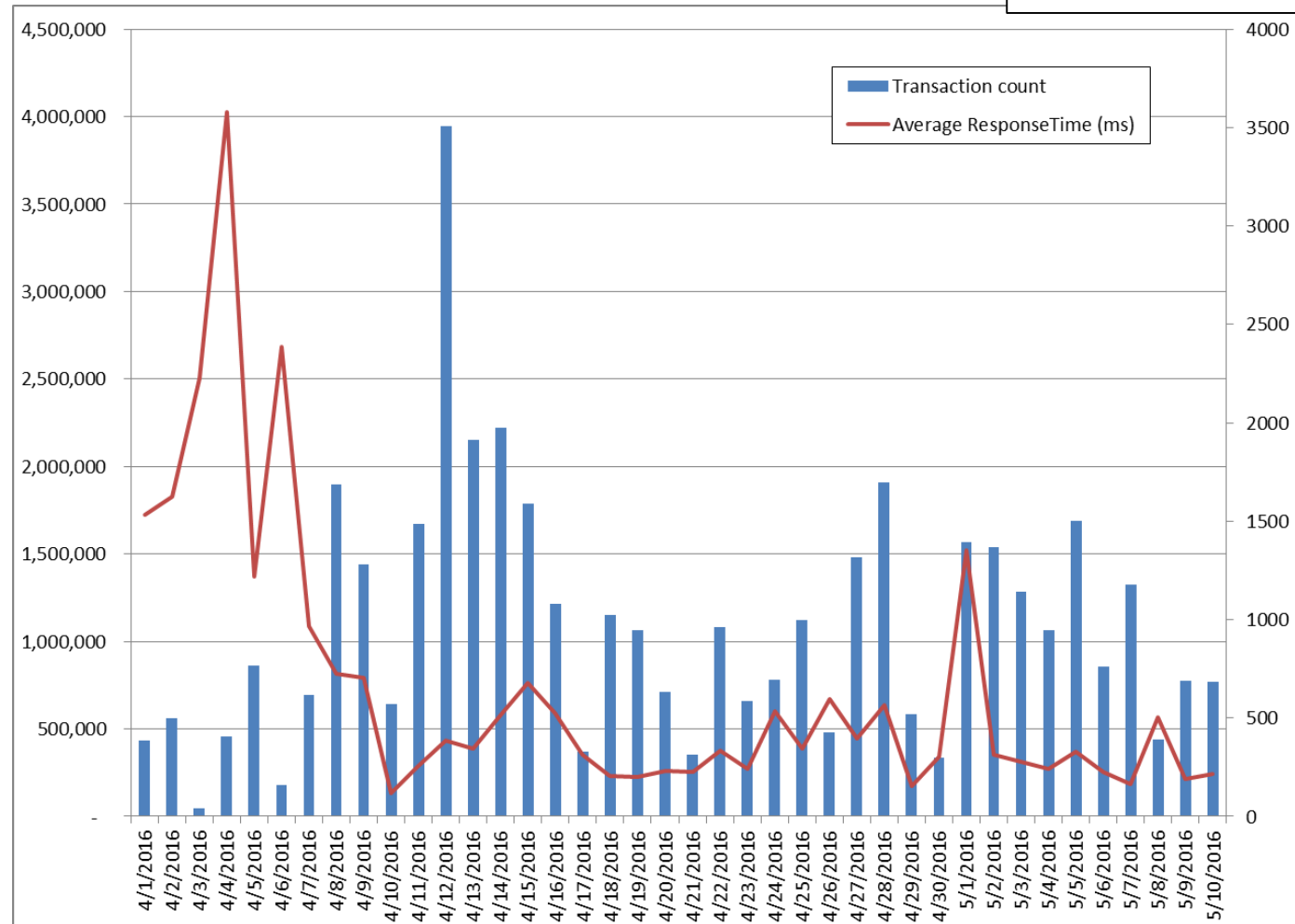
Ave. Freq. of Submission by LEAs	Count of LEAs
1	42
2	113
3	46
4	35
5	30
6	29
7	37
8	28
9	21
10	13
11	4
12	2
13	2
14	8
20	2
21	1
28	1
<b>Grand Total</b>	<b>414</b>



# Response time to AzEDS submissions

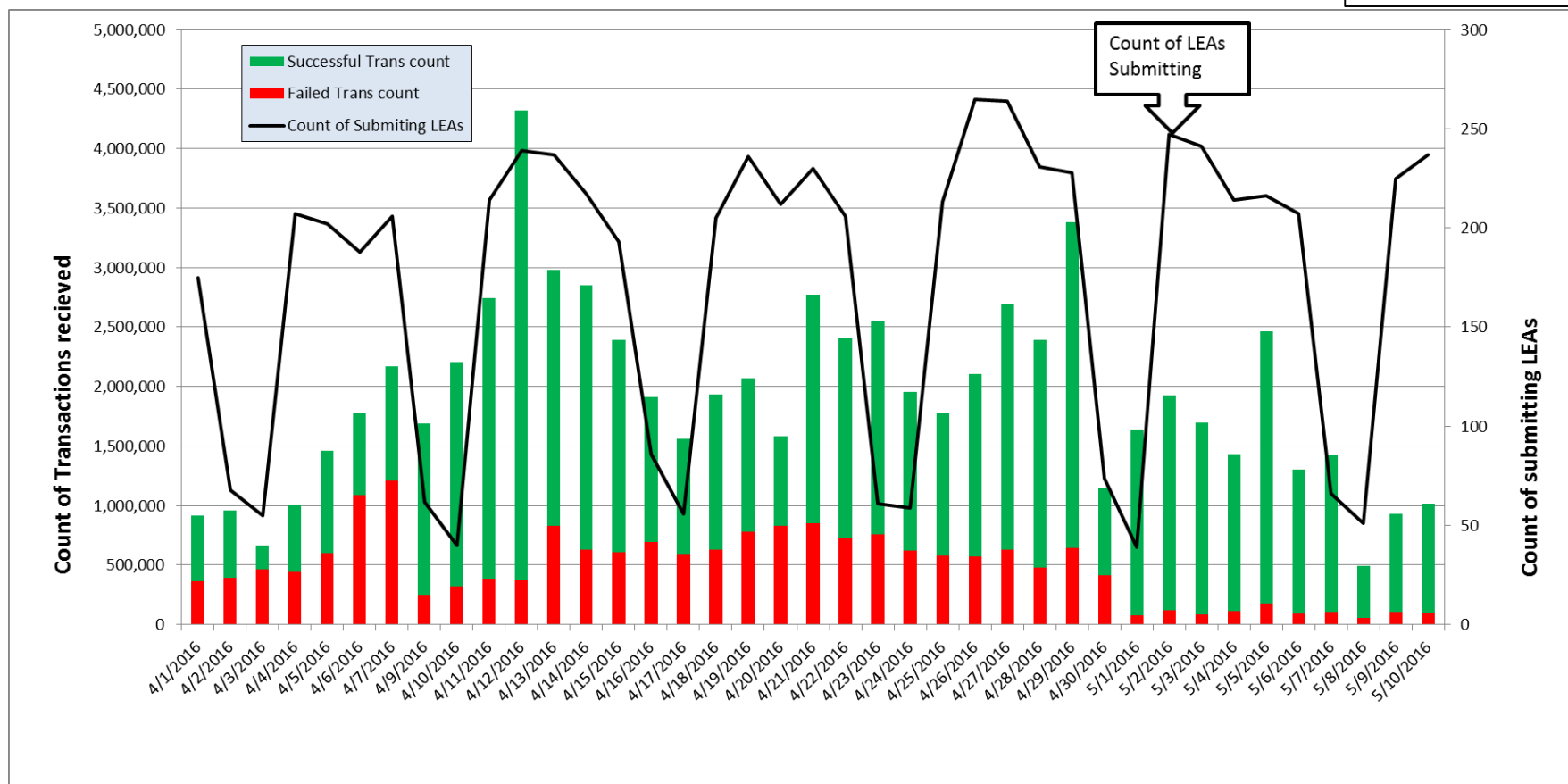
All Metrics as of 5/11/2016

Date	Transaction count	Average ResponseTime (ms)
4/1/2016	433,496	1533.696
4/2/2016	560,733	1626.435
4/3/2016	44,433	2228.000
4/4/2016	458,699	3577.870
4/5/2016	863,696	1221.130
4/6/2016	181,296	2383.565
4/7/2016	696,730	966.478
4/8/2016	1,895,408	722.478
4/9/2016	1,440,731	706.870
4/10/2016	643,946	118.870
4/11/2016	1,673,557	257.435
4/12/2016	3,946,459	384.833
4/13/2016	2,151,577	344.083
4/14/2016	2,221,272	512.064
4/15/2016	1,789,320	676.750
4/16/2016	1,216,798	525.240
4/17/2016	370,356	315.222
4/18/2016	1,151,030	206.043
4/19/2016	1,063,546	200.870
4/20/2016	709,310	233.042
4/21/2016	353,027	228.000
4/22/2016	1,082,409	336.000
4/23/2016	658,755	239.261
4/24/2016	778,405	535.864
4/25/2016	1,124,226	342.826
4/26/2016	477,574	595.739
4/27/2016	1,478,649	395.667
4/28/2016	1,908,324	565.400
4/29/2016	582,986	152.542
4/30/2016	334,790	304.217
5/1/2016	1,568,172	1350.167
5/2/2016	1,536,508	315.417
5/3/2016	1,285,895	279.750
5/4/2016	1,067,084	242.417
5/5/2016	1,688,933	331.500
5/6/2016	856,249	223.833
5/7/2016	1,321,840	163.333
5/8/2016	437,570	505.043
5/9/2016	777,749	192.292
5/10/2016	771,970	215.000
<b>Grand Total</b>	<b>43,603,508</b>	<b>646.799</b>



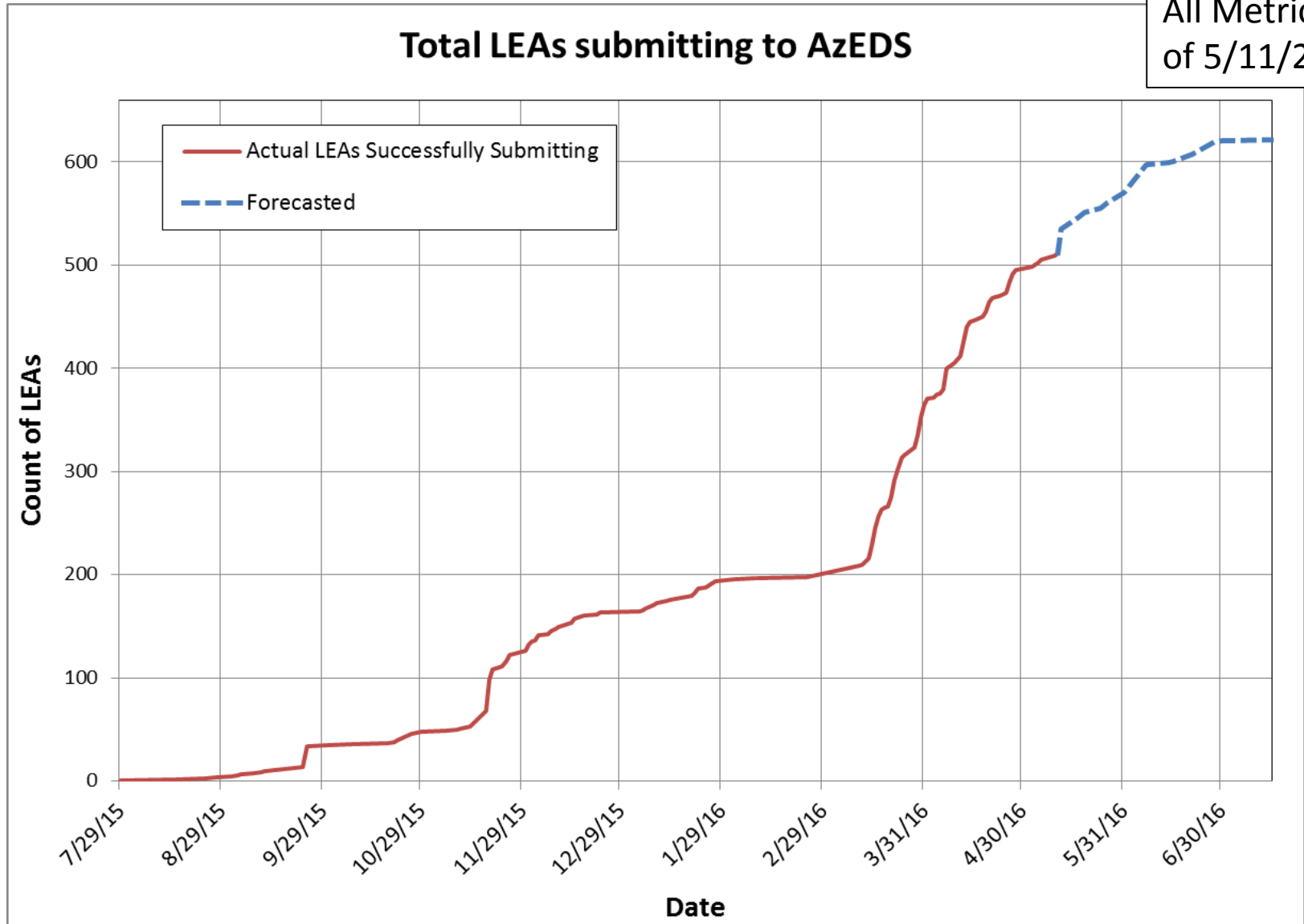
# Successful submissions to AzEDS

All Metrics as  
of 5/11/2016



# Migration of LEAs submitting to AzEDS

All Metrics as  
of 5/11/2016



# SAIS to AzEDS comparisons

	SAIS	AzEDS
<b>LEAs submitting data to system</b> (59 LEAs are currently transitioning from SAIS to AzEDS)	<b>142</b>	<b>518</b>
<b>Number of rules that may be updated or changed</b>	<b>0</b>	<b>315</b>
<b>Time required to run Integrity (validation of data)</b>	<b>2 days</b>	<b>Less than 4 hours</b>
<b>Time required to run end-of-month Integrity (statewide aggregation)</b>	<b>5 days</b>	<b>Less than 5 hours</b>
<b>Time required to recalculate statewide ADM</b>	<b>5 days</b>	<b>&lt;1 hour</b>
<b>Ability for LEAs to audit transaction history</b>	<b>Not Auditable</b>	<b>Auditable</b>
<b>Total transactions processed in last 30 days</b>	<b>15,000,000</b>	<b>31,000,000</b>



Lisa Blyler

# **FY17 BUDGET PROPOSAL**

# FY16 recap and deliverables

- Emphasis on completing Student portion of SAIS replacement
  - 78% of student population now submitting to AzEDS
  - AzEDS becomes system of record in FY17
  - Deployed new School Finance processing engine
- Continue rollout of Statewide Student Information System
- Ongoing technical support for AELAS tools
  - ADEConnect, AZDash, SSIS, AzEDS support personnel
  - Ensures education community of state's commitment to sustainability

# What was tabled in FY16

- Integrating existing systems that use SAIS for data
- 1-year implementation for SAIS replacement
- New dashboards for AZDash
- Adequate software/hardware needs for AELAS development
- Roll out of opt-in teaching and learning tools that have been developed



# FY12-16 budget expenditures

Project	FY2012	FY2013	FY2014	FY2015	FY2016	Project Spend Total
SAIS Replacement	\$2,817,422	\$2,978,442	\$2,012,168	\$3,791,082	\$1,629,175	\$13,228,291
School Finance	\$0	\$577,633	\$771,427	\$1,222,344	\$1,367,224	\$3,938,627
SLDS	\$986,236	\$716,800	\$1,048,242	\$1,884,615	\$0	\$4,635,893
SSIS	\$0	\$64,724	\$176,316	\$808,783	\$660,373	\$1,710,195
Production Support	\$316,440	\$2,115,858	\$2,507,015	\$3,407,485	\$3,689,137	\$12,035,935
Teacher Tool (LMS, CMS, etc.)	\$0	\$298,366	\$403,613	\$611,983	\$76,022	\$1,389,983
					*as of 4/30/16	
FY Total	\$4,120,099	\$6,751,823	\$6,918,780	\$11,726,292	\$7,421,931	\$36,938,925

# FY17 original AELAS request

AELAS Initiative	FY17 Proposed	Project goal
New state aid payment calculator	\$2,500,000	Replace SAIS's 48 poorly-developed manual state aid calculation tools
Overhauled student details databases	\$3,800,000	Replace SAIS's poorly-developed databases that collect student data for state aid payments
Statewide Student Information System	\$500,000	Leverage state contract for student information system resulting in significant savings for districts; Funds used to support system implementation
Student performance reporting tool	\$500,000	Turning data into useable information to improve classroom instruction
<b>TOTAL</b>	<b>\$7,300,000</b>	
ADE IT support	FY17 Proposed	Goals
Project goal Program Management	\$500,000	Interface with local school districts; Financial accountability; Contract oversight; and Software development management
AELAS maintenance and support	\$2,675,000	\$2,675,000 Personnel and software licenses to run system; Without this line item, none of this will function.
<b>TOTAL</b>	<b>\$3,175,000</b>	

# Future proofing our tech investments

- The move to cloud-based processing/storage has minimized:
  - Security risk
  - Financial investment
  - Falling behind with patches and upgrades
  - Allowed applications to scale with unforeseen growth
  - Allowed ADE to pay only when they develop
  - Created a long-term, economical solution for hardware upgrades
  - Allowed ADE to rent hardware instead of buying it
  - Allowed ADE to avoid building on obsolete hardware

# AELAS support costs

- Increased external-facing systems require manpower to perform day-to-day operation and management of existing services
- ADE IT has been capturing costs to maintain complex system like AELAS since FY13
- State legislature has not included funding for ongoing support
  - SAIS fell into disrepair because of lack of funding and technology advancements
  - AELAS will suffer same fate with same treatment
- ADE will not squander the investment

# FY17 support costs

- Ongoing program and financial management
- Network and infrastructure improvements
  - release management, patch administration, systems security, monitoring, server maintenance, administration, and network operations,.
- Continued emphasis on support center
- Hardware maintenance and software license renewals
- \$3,175,000

# Priorities for FY 2017

- Complete SAIS student replacement and decommissioning
  - APOR and CHAR will not be completed in FY 2017
  - Business requirements for AELAS School Finance applications
- Build internal connections to AzEDS to reduce burden on LEAs
- Ensure proper support and management of overall project and newly-developed tools
- Continue implementation of opt-in tools to interested LEAs
  - Statewide Student Information System

# Remaining AELAS work beyond FY17

- **Most critical is ongoing support for new data system**
- New AZDash dashboards based on user input
- AELAS School Finance development and release
- Transition applications from old to new system
- SALS replacement 'clean up' work based on unknown variables

# FY18 forecast for financial applications

- Reduced appropriation delays refactoring of APOR and CHAR
  - Core School Finance calculations
  - Discovery and modest design work to be completed
- Prior improvements have allowed ADE to reduce processing time from days to mere minutes
- SAIS continues to be operating on borrowed time



# AELAS cost estimates for ongoing operations in FY17

PROJECT NAME	FY2017	Headcount (FTE)
<b>AZDash</b> Ongoing Support and Maintenance of Student Data Stores and Data Refreshes of AZDash	\$400,000	3.0
<b>ADEConnect</b> Maintain 24 hour access to ADE systems and reports for all stakeholders	\$240,000	2.0
<b>AELAS Program Support Office (PSO)</b> Program Level Management of AELAS Development and Operations	\$700,000	8.0
<b>AELAS Operations Services</b> Ongoing Operations Support of AELAS Infrastructure	\$1,835,000	15.0
<b>OEMS</b> AzEDS Contact and Organization Management Support	\$0	0.0
<b>AELAS Operations subtotal</b>	<b>\$3,175,000</b>	<b>28.0</b>
<b>AELAS Ed-Fi (AzEDS)</b> Support, Maintenance, diagnostics and repairs of software issues	\$465,000	4.0
<b>School Finance</b> Technical support, verification, maintenance of School payment engines	\$535,000	5.0
<b>Prop 301 Funding subtotal</b>	<b>\$1,000,000</b>	<b>9.0</b>
<b>TOTAL</b>	<b>\$4,175,000</b>	<b>37.0</b>

# AELAS cost estimates for ongoing operations in FY18

PROJECT NAME	FY2018
<b>AZDash</b> Ongoing Support and Maintenance of Student Data Stores and Data Refreshes of AZDash	<b>\$750,000</b>
<b>ADEConnect</b> Maintain 24 hour access to ADE systems and reports for all stakeholders	<b>\$700,000</b>
<b>AELAS Program Support Office (PSO)</b> Program Level Management of AELAS Development and Operations	<b>\$750,000</b>
<b>AELAS Operations Services</b> Ongoing Operations Support of AELAS Infrastructure	<b>\$2,200,000</b>
<b>OEMS</b> AzEDS Contact and Organization Management Support	<b>\$450,000</b>
<b>AELAS Operations subtotal</b>	<b>\$4,850,000</b>
<b>AELAS Ed-Fi (AzEDS)</b> Support, Maintenance, diagnostics and repairs of software issues	<b>\$600,000</b>
<b>School Finance</b> Technical support, verification, maintenance of School payment engines	<b>\$400,000</b>
<b>Required SAIS Replacement Support Funding subtotal</b>	<b>\$1,000,000</b>
<b>TOTAL</b>	<b>\$5,850,000</b>

# AELAS cost estimates for FY17 completion

PROJECT NAME	FY2017
<b>AZDash</b> No New Development	\$0
<b>AELAS School Finance</b> Completion and warranty of Current Year Funding effort. Discovery and Design of replacement of SAIS's 48 manual state aid calculation tools including APOR/CHAR and budget applications	\$740,000
<b>AELAS Ed-Fi (AzEDS)</b> Full LEA implementation of student data collection system and additional development/release of 150 remaining business rules to support federal/state reporting. Continued development and deployment of data services, migrating more than 80 existing ADE applications to AzEDS.	\$3,305,000
<b>AELAS Opt-in SIS</b> Leverage state contract for student information system resulting in significant savings for districts; Funds used to support system implementation	\$180,000
<b>CEDS</b> Development tasks closely related to AzEDS deliverables in FY2017. Will submit new PIJ for FY 2018 addressing standalone efforts	\$0
<b>TOTAL</b>	<b>\$4,225,000</b>

# AELAS cost estimates for FY18 completion

PROJECT NAME	FY2018
<b>AZDash</b> Prioritize, Develop, test, and deploy new dashboards to AZDash.	\$500,000
<b>AELAS School Finance</b> Development and implementation of replacement of SAIS's 48 manual state aid calculation tools including APOR/CHAR and Budget applications	\$2,800,000
<b>AELAS Ed-Fi (AzEDS)</b> Develop/deploy new rules for student data collection per statute. Complete discovery, design, development and deployment of support system replacements (Enterprise). Includes 7 unsupported high use SAIS applications	\$3,000,000
<b>AELAS Opt-in SIS</b> No new funding required. Project sustainability estimated in FY 2018	\$0
<b>CEDS</b> Convert and Transition Existing application connections from Enterprise to ODS	\$2,500,000
<b>TOTAL</b>	<b>\$8,800,000</b>

# AELAS allocation of state funding

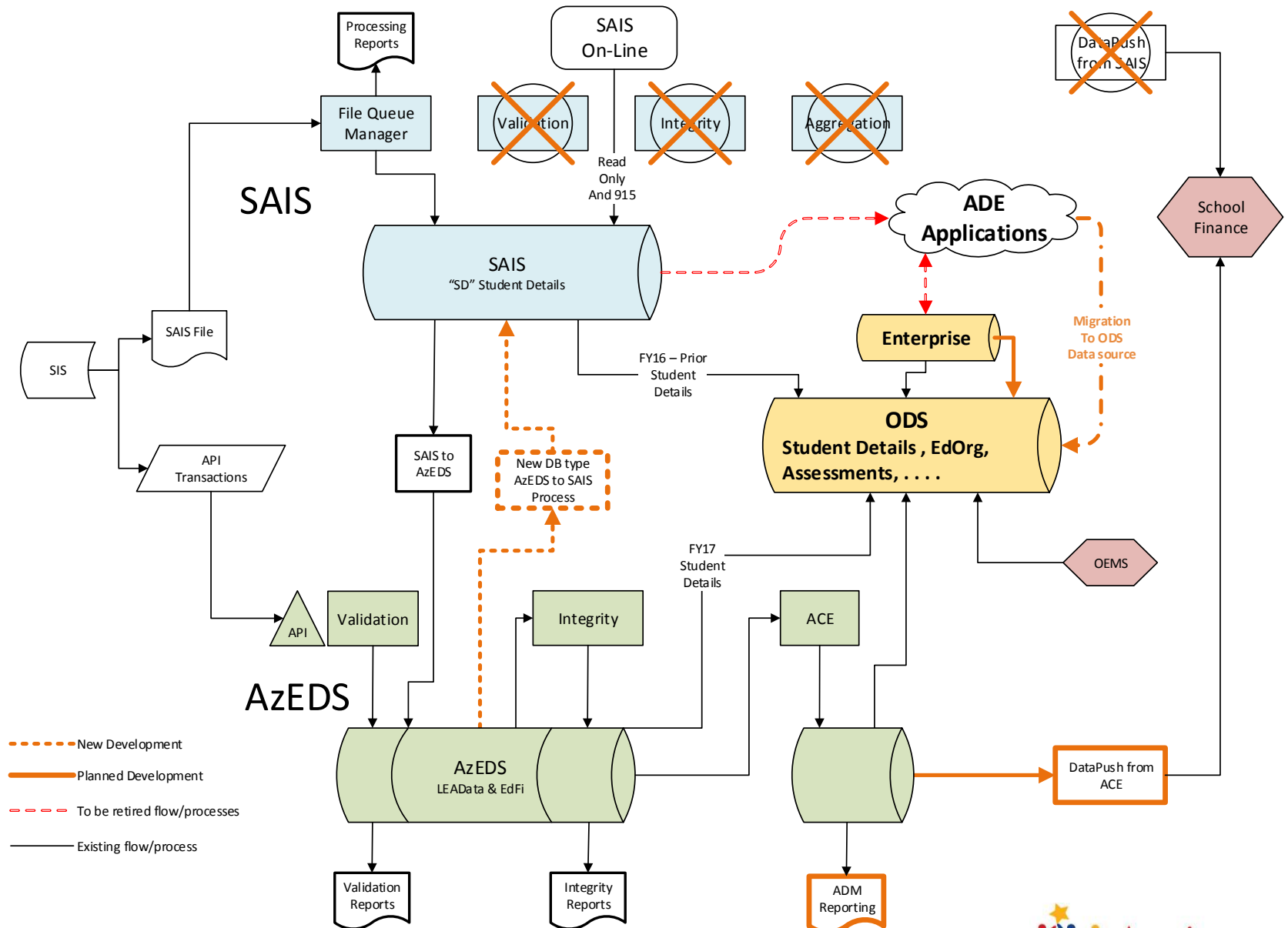
• Program Support Office	\$ 700,000
• Operations Services	\$ 1,835,000
• AZDash	\$ 400,000
• ADEConnect	\$ 240,000
• AELAS School Finance	\$ 740,000
• AELAS Ed-Fi (AzEDS)	\$ 3,305,000
• AELAS Opt-in SIS	\$ 180,000
• TOTAL	\$ 7,400,000



Henry Williams

# **AELAS DATA ARCHITECTURE REVIEW**

# AELAS FY16-17 architecture



# Agency ODS Ed-Fi domains FY16 deliverables

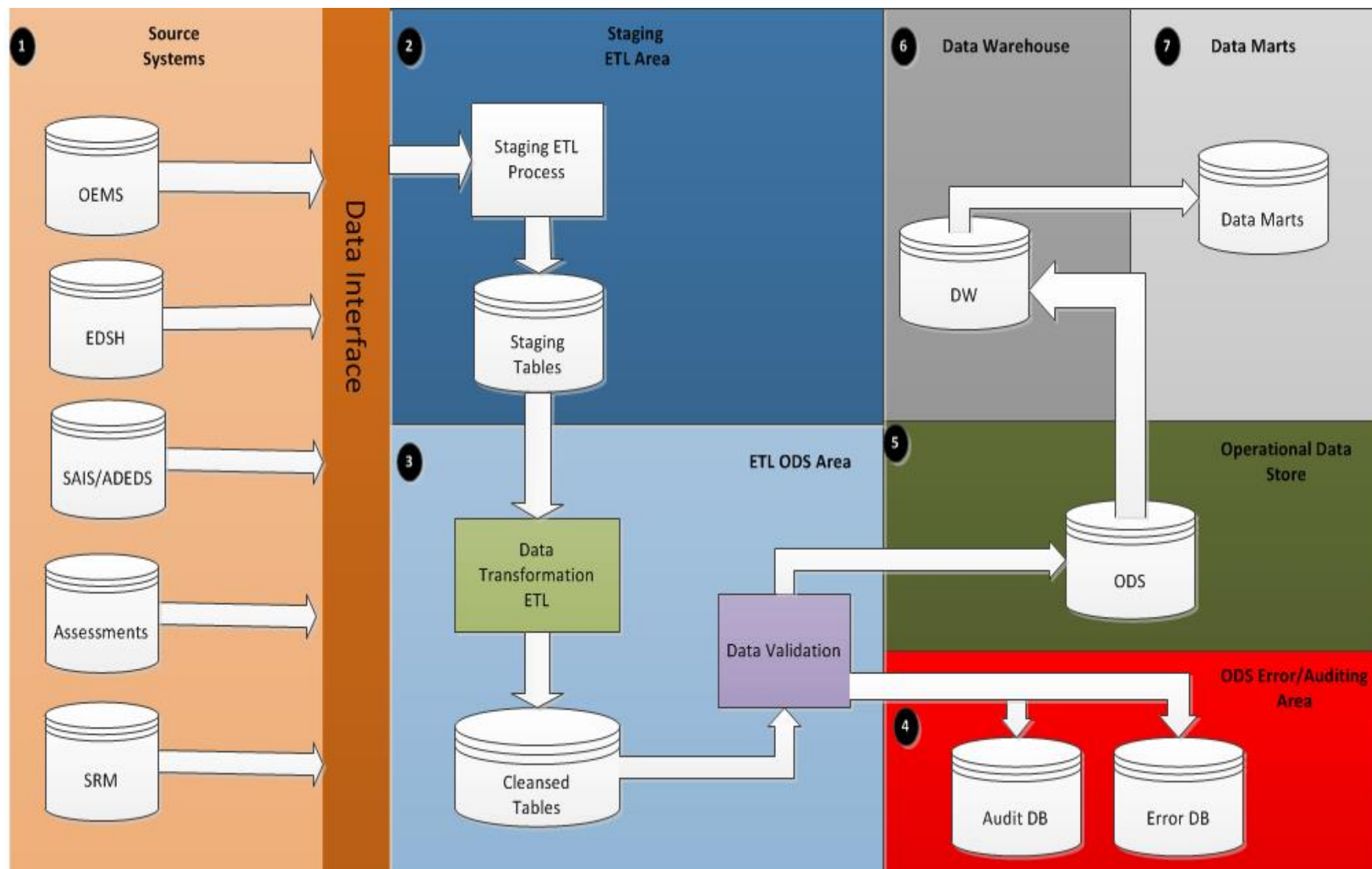
Education Organization	Enrollment	School Calendar	Staff	Student Attendance
The Education Organization domain defines the organizational structure of the Education Organizations within the scope of the Ed-Fi application. The entity Education Organization serves as an abstraction for common attributes and associations	The Enrollment domain represents students' enrollments in Schools, as specifically designated by the Student School Association. The model supports two cases of enrollment. The first case limits enrollment to one school at a time whereas the second case supports multiple school enrollments.	The School Calendar domain represents the instructional days, sessions, and grading periods defined for a school year. The defined Sessions for a school year are associated with the SEA, LEA, or school that defines the calendar	<b>Staff:</b> is a specialization of Person and captures additional information about experience and credentials <b>Teacher:</b> is a specialization of Staff and captures additional information and associations relating to instructional duties	The Student Attendance domain represents both daily and class period (section) attendance. This model supports two approaches for collecting attendance data: <ul style="list-style-type: none"> <li>Attendance Events</li> <li>Exception Only</li> </ul>
Enterprise/OEMS	Student Details	Enterprise	EDSH	Student Details



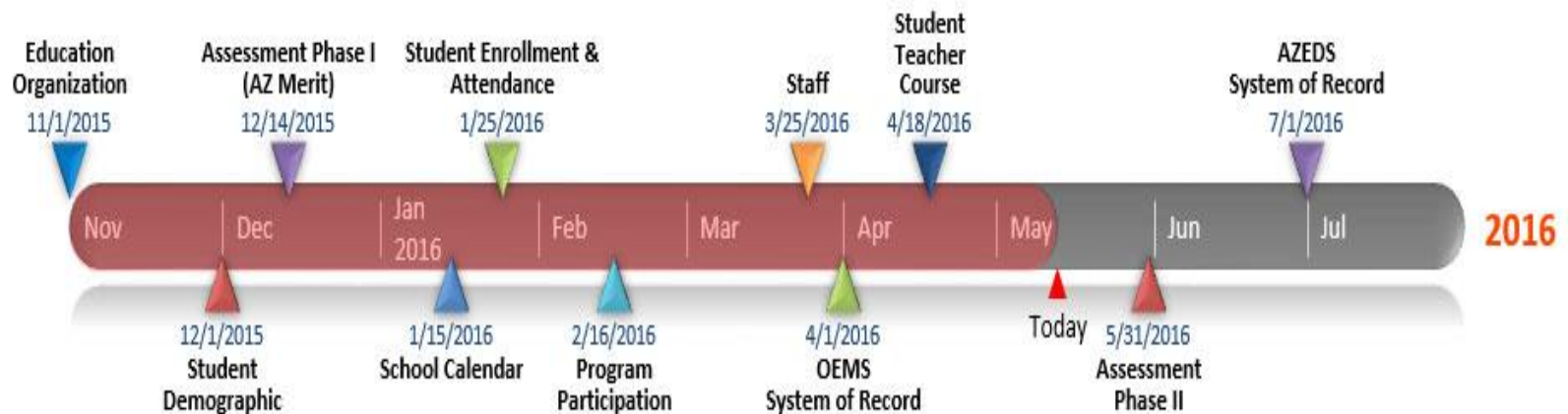
# Agency ODS ED-FI domains (cont)

Assessment	Student Identification and Demographics	Teaching and Learning	Program Participation
This domain defines a model that can be used for a wide variety of assessments, including early childhood assessments, state standardized assessments, college entrance exams, benchmark assessments and course assessments	<p>The Student Identification and Demographics domain represents the core information about Students and Parents:</p> <ul style="list-style-type: none"> <li>• Student is a specialization of Person; the Person entity defines a PersonUniqueStateId when a single identity spans all types of persons</li> <li>• Parent is also a specialization of Person, and naturally spans all variants of parent, guardian</li> </ul>	<p>The Teaching and Learning domain represent the following concepts:</p> <ul style="list-style-type: none"> <li>• Course Catalog representing the Course definitions and Course Offerings</li> <li>• The student's class enrollments in Sections and the Teacher(s) assigned to that Section</li> <li>• The early childhood enrollments in Programs and associated Staff members</li> </ul>	<p>This domain defines the model for a range of programs, including education programs, alternative programs, extracurricular programs, supplemental programs</p> <ul style="list-style-type: none"> <li>• Program defines programs with services offered by an Education Organization</li> <li>• Student Program Association links Programs to participating Students</li> <li>• Staff Program Association links Programs to assigned Staff</li> </ul>
Multiple DB's & Flat Files	Student Details	SRM Student Details EDSH	Student Details

# High-level ODS architecture



# Timeline of ODS transition



Robert Callahan

# **IT AND DATA SECURITY UPDATE**

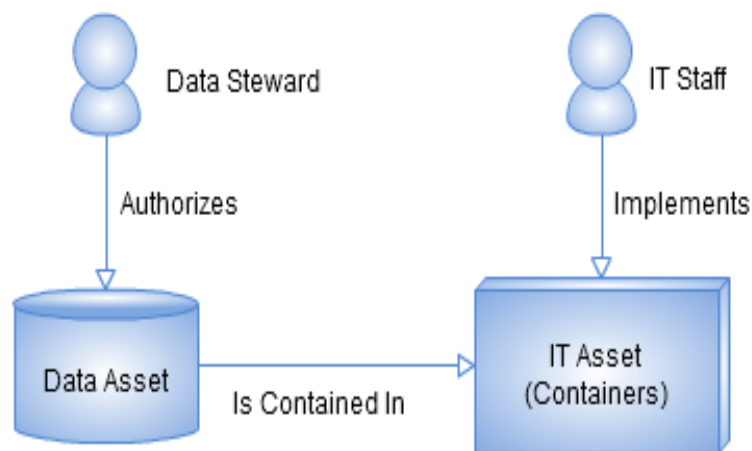
# Data access dependent on compliance

- ADE needs to provide access to data in compliance with policy
- Data owners do not have the complete picture of the technology used to host their data
- ADE does not know if an access request is approved by the data owner for implementation
- Audit record is incomplete
- No process exists for data owners/stewards to review currently assigned data access



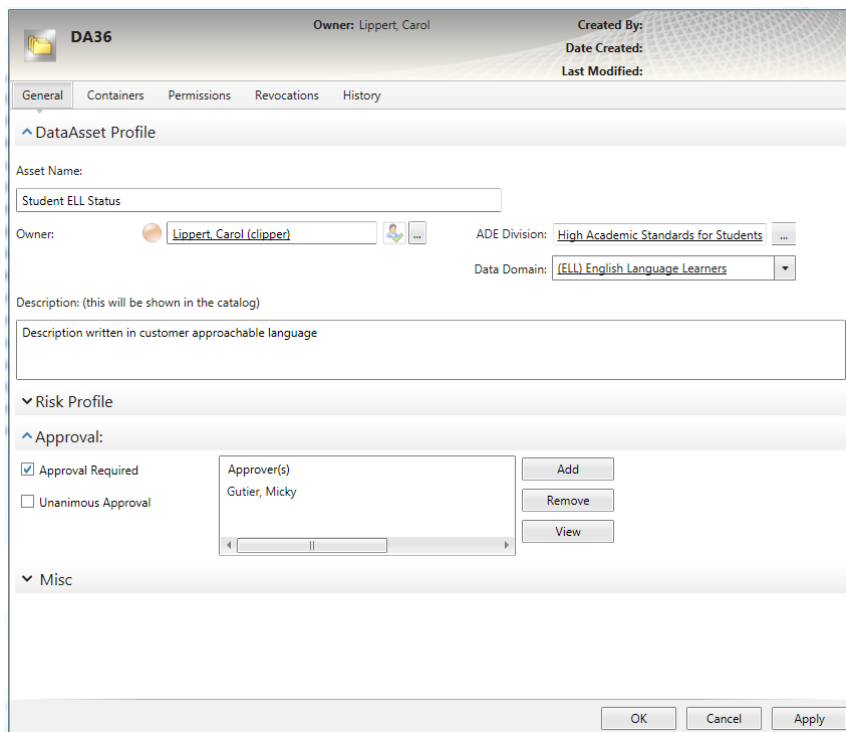
# Suggested solution for data access

- Use Service Manager to document the relationship between Data Assets and IT Assets
- Use automation to translate requests for access to IT Assets to data owners and data stewards



# Data management forms created

## Data asset



**DA36** Owner: Lippert, Carol Created By: Date Created: Last Modified:

General Containers Permissions Revocations History

**DataAsset Profile**

Asset Name:  
Student ELL Status

Owner: Lippert, Carol (clipper) ADE Division: High Academic Standards for Students Data Domain: (ELL) English Language Learners

Description: (this will be shown in the catalog)  
Description written in customer approachable language

**Risk Profile**

**Approval:**

☒ Approval Required ☐ Unanimous Approval

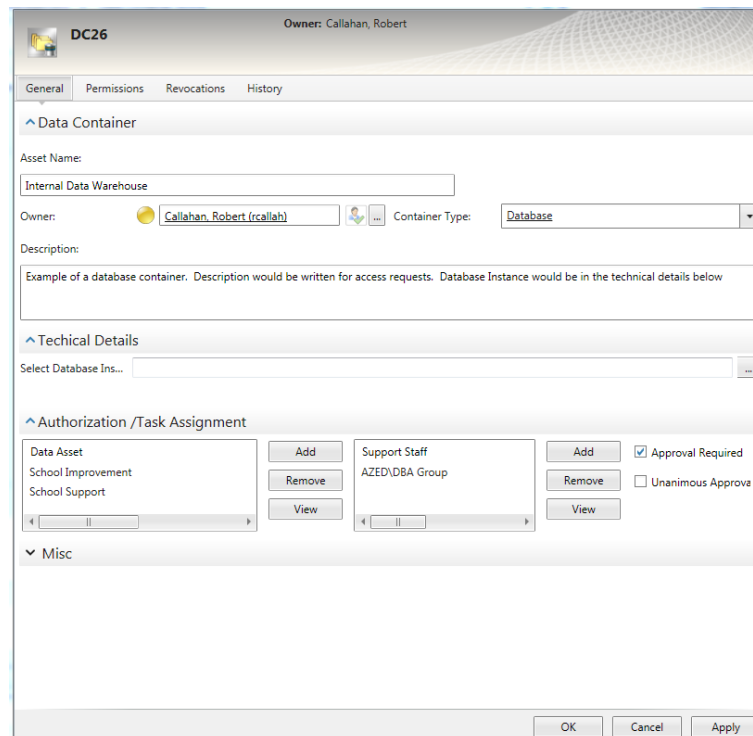
Approver(s): Gutier, Micky

Add Remove View

**Misc**

OK Cancel Apply

## Technical asset



**DC26** Owner: Callahan, Robert

General Permissions Revocations History

**Data Container**

Asset Name:  
Internal Data Warehouse

Owner: Callahan, Robert (rcallah) Container Type: Database

Description:  
Example of a database container. Description would be written for access requests. Database Instance would be in the technical details below

**Technical Details**

Select Database Ins...

**Authorization /Task Assignment**

Data Asset	Support Staff	Approval Required
School Improvement	AZED/DBA Group	<input checked="" type="checkbox"/>
School Support		<input type="checkbox"/> Unanimous Approval

Add Remove View

**Misc**

OK Cancel Apply


# Data access requests created

## Application data request




4586 Owner:

General History




^ Access Request

Requester:  Marten, Rod (rmarten) Request Type: Application

Grant access rights to data on the following systems:

Data Container: Internal Data Warehouse   

Select Application(s) that requires access:

Affected Appli...: AZDash   

^ Details:

Description: AZDash needs access to the data warehouse to provide reporting for....

Notes:


OK Cancel Apply

## User data request




4596 Owner:

General History




^ Access Request

Requester:  Read, Christina (cread) Request Type: Individual Employee

Grant access rights to data on the following systems:

Data Container: The Hub   

Select User(s) that requires access:

Affected User: Marten, Rod  
Lowe, Robin   

^ Details:

Description: Employees need to be able to do emergency updates to data on the hub.

Notes:

OK Cancel Apply



# Options for processing requests

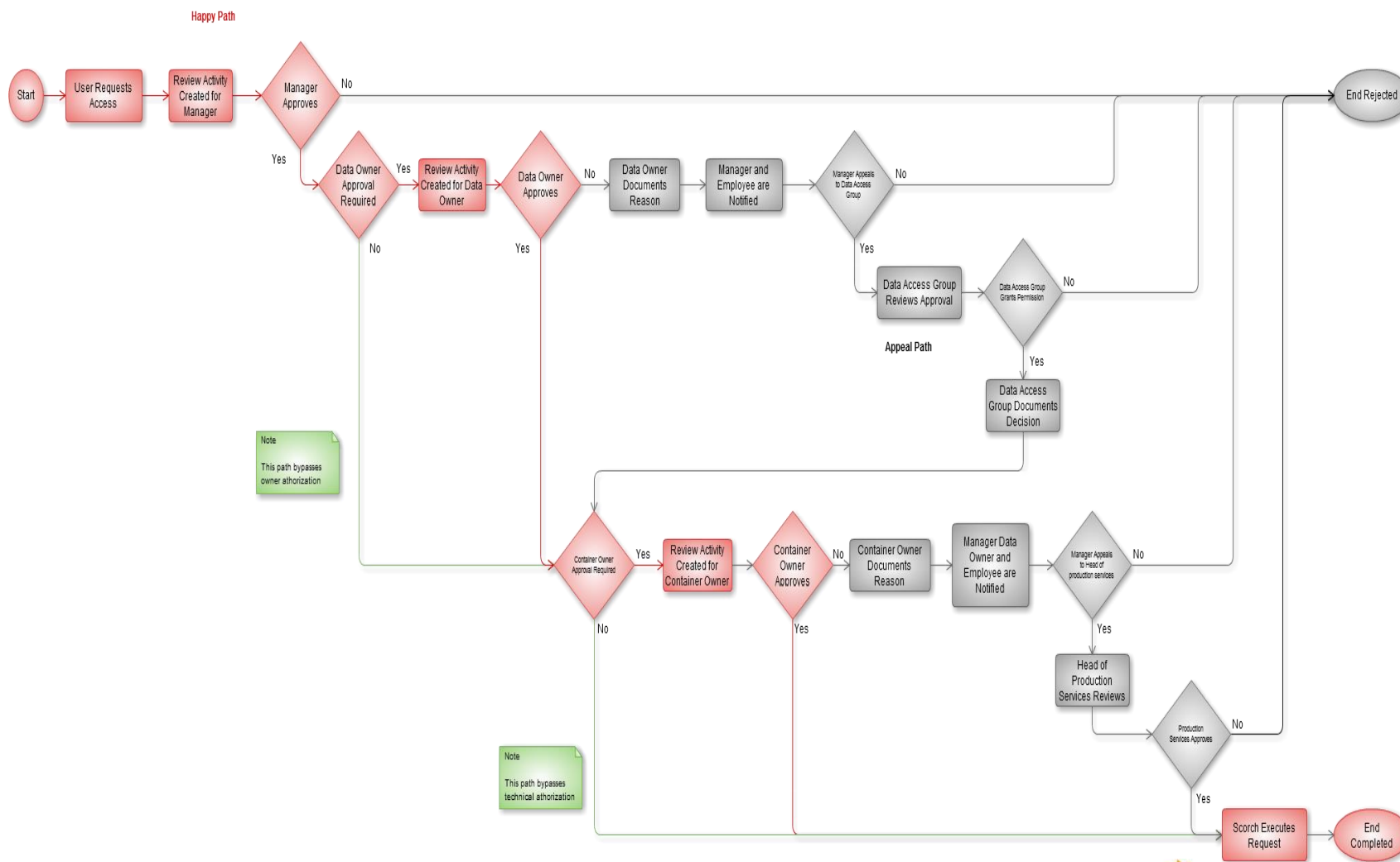
## User requests

- Web portal
- Service Manager console
- Web services (for application integration)
- Support call center

## Approving requests

- Email reply
- Web portal
- Service Manager console

# Track the progress of a request





Aiden Fleming

# **LEGISLATIVE WRAP UP**

# Thank You



Deputy Associate Superintendent of ADE IT

Lisa Blyler

602-542-3144

[Lisa.Blyler@AZED.gov](mailto:Lisa.Blyler@AZED.gov)

Follow ADE IT on [Facebook](#) and [Twitter](#)